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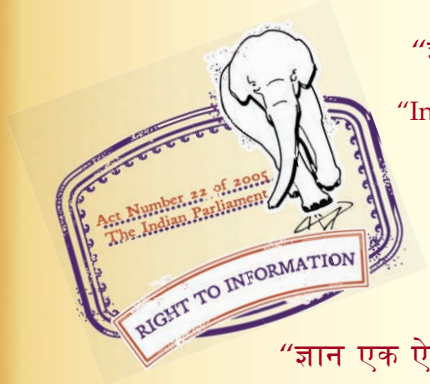
IS 838 (1976): Tin Rollers for Cotton Ring Spinning Frames
[TXD 14: Machinery for Fabric Manufacture]



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Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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IS : 8[illegible] - 1976
(Reaffirmed 1998)

Indian Standard

SPECIFICATION FOR TIN ROLLERS FOR COTTON RING SPINNING FRAMES

(*First Revision*)

UDC [illegible]

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

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October 1976

Indian Standard

SPECIFICATION FOR TIN ROLLERS FOR COTTON RING SPINNING FRAMES

(First Revision)

Spinning Machinery (Cotton System) Sectional Committee, TDC 30

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Indian Standard

SPECIFICATION FOR TIN ROLLERS FOR COTTON RING SPINNING FRAMES

(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 10 August 1976, after the draft finalized by the Spinning Machinery (Cotton System) Sectional Committee had been approved by the Textile Division Council.

0.2 This standard was originally published in 1962. In this revision provision has been made for use of material other than tin plate and dimensions as agreed to between the buyer and the seller. This opportunity has also been availed to incorporate packing and sampling details.

0.3 In a spinning frame, a revolving drum known as 'tin roller' drives the spindles by means of spindle tapes. As it is impractical to build light-weight tin roller stiff enough for the entire length of a spinning frame in one piece, a number of tin rollers, each generally not exceeding 3 050 mm in length are joined together to form a line of tin rollers.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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1. SCOPE

1.1 This standard prescribes the requirements of tin rollers for cotton ring spinning frames.

2. MATERIAL

2.1 The body and the reinforcing discs shall be made of tin plates or any other material with suitable coating to prevent rust formation. End and middle blocks shall be made of cast iron. The solder used in fabrication shall contain 49 to 50 percent tin.

*Rules for rounding off numerical values (*revised*).

3. MANUFACTURE AND SHAPE

3.1 A line of rollers illustrated in Fig. 1, 2 and 3 shall preferably be fabricated as illustrated in Fig. 4.

4. WORKMANSHIP AND FINISH

4.1 The surface of the roller shall be free from dents, rust and other manufacturing defects.

5. REQUIREMENTS

5.1 Dimensions — The dimensions of roller shall be as agreed to between the buyer and the seller. Dimensions in common use are shown in Fig. 5.

5.2 Run-Out — The run-out of roller at two consecutive bearings shall not exceed 0·5 mm. This shall be checked on minimum three different positions.

5.3 Dynamic Balance — Each roller shall be dynamically balanced.

5.3.1 The roller shall be held to have been dynamically balanced if no vibration is perceptible at a speed of 1250 rpm when mounted on a dynamic balancing machine or a testing device.

6. MARKING

6.1 Each roller shall be marked with the following:

a) Brand or trade-mark of the manufacturer;

b) Length of roller; and

c) Position of roller (drive-end, off-end or middle).

6.1.1 Rollers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

7. PACKING

7.1 The rollers shall be packed in wooden cases/crates in such a way that the end blocks are held in position with the help of wooden blocks. Alternatively, the rollers shall be covered fully with twisted strands of straw of not less than 75 mm diameter to avoid damage in transit.

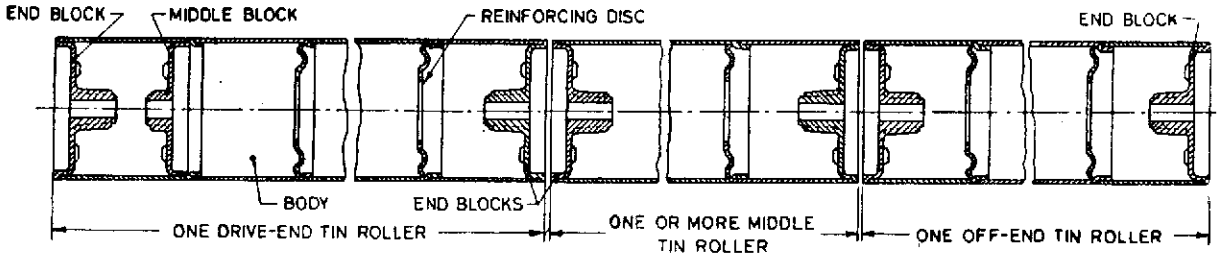


FIG. 1 LINE OF TIN ROLLERS (SECTIONED VIEW)

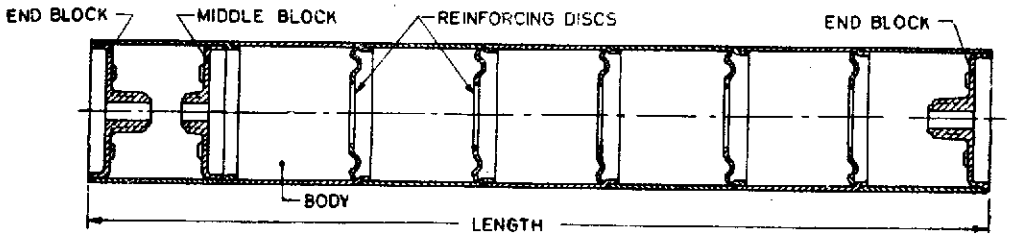


FIG. 2 DRIVE-END TIN ROLLER (SECTIONED VIEW)

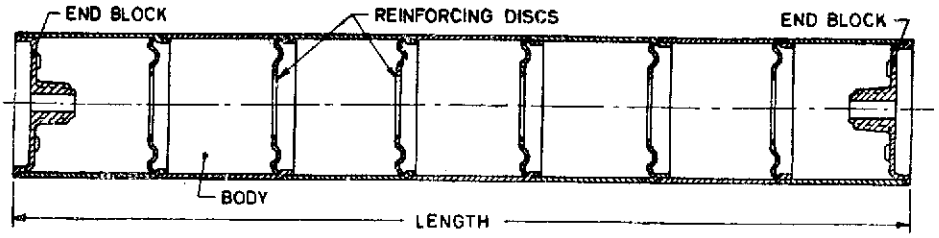


FIG. 3 MIDDLE OR OFF-END TIN ROLLER (SECTIONED VIEW)

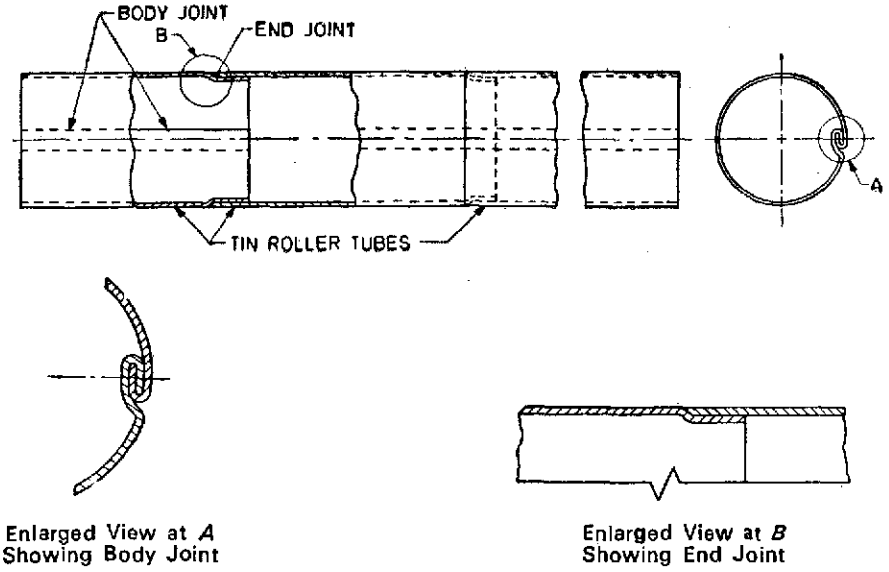
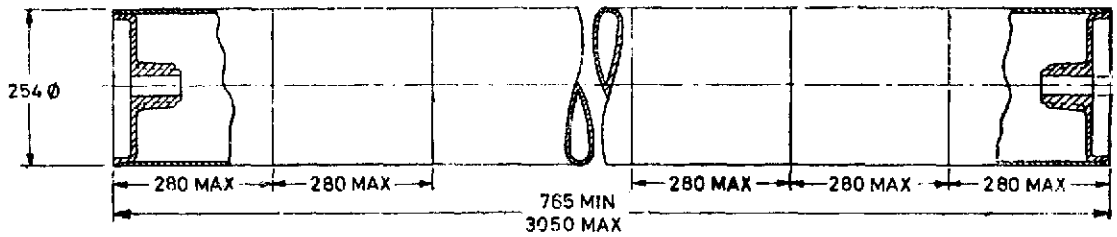


FIG. 4 TYPES OF JOINT IN TIN ROLLER



All dimensions in millimetres.

FIG. 5 DIMENSIONS OF TIN ROLLER

8. SAMPLING

8.1 Lot — All the tin rollers of the same dimensions delivered to a buyer against one despatch note shall constitute a lot.

8.2 Unless otherwise agreed to between the buyer and the seller, the number of rollers to be inspected shall be according to col 1 and 2 of Table 1.

TABLE 1 SAMPLE SIZE AND CRITERIA FOR CONFORMITY

Lot Size	Sample Size	Permissible Number of Defective Rollers
(1)	(2)	(3)
Up to 15	2	0
16 to 25	3	0
26 ,, 100	5	0
101 ,, 150	8	0
151 ,, 300	13	0
301 and above	20	1

8.3 The rollers selected according to **8.2** shall be examined for workmanship and finish, dimensions and run-out. Any roller not meeting the requirements of any one of the above characteristics shall be considered defective.

8.4 Criteria for Conformity — The lot shall be considered conforming to the requirements of this standard if the number of rollers found defective is less than or equal to the corresponding number given in col 3 of Table 1.

INDIAN STANDARDS

ON

SPINNING MACHINERY (COTTON SYSTEM)

IS:

837-1962 Doffer and flat stripping comb blades

838-1976 Tin rollers for cotton ring spinning frames (*first revision*)

1927-1961 Flat driving chains for carding engines

2510-1976 Bottom rollers for drafting systems (*third revision*)

2699-1964 Flats and flats' screws

3056-1965 Lap rods

3078-1976 Rings for spinning and doubling frames (*third revision*)

3176-1971 Anti-friction bearing type top rollers for ring and speed frames (*first revision*)

3183-1965 Saw-toothed wire for licker-in cylinder

3190-1965 Designation of sides and hand of spinning preparatory, spinning and doubling machinery

3523-1974 Metal travellers for ring spinning frame (*second revision*)

3698-1966 Spindles for warp ring frames

3934-1974 Aluminium plug type spindles for spinning and doubling frames (*first revision*)

4474-1967 Glossary of terms relating to drafting in spinning machinery

5138-1969 Ear-shaped metal travellers for doubling frame

5938-1970 Spindle gauges for cotton ring spinning and ring doubling (twisting) frames

6001-1971 Flyer spindles

6068-1970 Nomenclature of spinning machinery (preparatory to doubling) cotton system

6666-1972 Nose bars for speed and ring spinning frames

6786-1972 Leaf gauges for carding engine (metric system)

7175-1974 Cots for top rollers

7468-1974 Working widths of worsted and woollen cards

7875 (Part I)-1976 Sliver cans used in textile mills: Part I General requirements

7875 (Part II)-1975 Sliver cans used in textile mills: Part II Vulcanized fibre sliver cans

7875 (Part III)-1975 Sliver cans used in textile mills: Part III Aluminium alloy sliver cans